

# **Curriculum Vitae**

Diane Palmieri, Ph.D.

## **Education**

- 1991-1995, Bachelor of Science in Biotechnology  
Department of Biology  
Rochester Institute of Technology  
Rochester, New York
- 1995-2000, Doctor of Philosophy  
Department of Pathology and Laboratory Medicine  
University of North Carolina  
Chapel Hill, North Carolina  
Dissertation: Serpins in Cancer, ©2000

## **Employment History**

- January 2001 – February 2002      Cancer Research Training Fellow  
Women’s Cancer Section, Laboratory of Pathology,  
NCI, NIH
- February 2002 – July 2005      Research Fellow  
Women’s Cancer Section, Laboratory of Pathology,  
NCI, NIH
- July 2005 – Present      Staff Scientist  
Women’s Cancer Section, Laboratory of Molecular  
Pharmacology, NCI, NIH

## **Grant Support**

- 2006- Co-Principle Investigator, Department of Defense (DOD) Breast Cancer Research Program (BCRP) Center of Excellence “Studies Directed toward the Eradication of Brain Metastases of Breast Cancer.”
- 2009 – Principle Investigator, Inflammatory Breast Cancer Research Foundation grant, “Development of mouse models of inflammatory breast cancer brain metastasis.”

## **Patents**

- Submitted – Use of histone deacetylase inhibitors for the treatment of central nervous system metastases

### **Publications – Peer Reviewed**

1. Kaufmann, W.K., Byrd, L.L., **Palmieri, D.**, Nims, R.W., and Rice, J.M. 1997. TGF- $\alpha$  sustains clonal expansion by promoter dependent, chemically initiated rat hepatocytes. *Carcinogenesis*, 18:1381-7.
2. **Palmieri, D.**, Watson, J.M., and Rinehart C.A. 1999. Age-related expression of PEDF/EPC-1 in human endometrial stromal fibroblasts: Implications for interactive senescence. *Experimental Cell Res.*, 247:142-7.
3. Rinehart, C.A., Watson, J.M., Torti, V.R., and **Palmieri, D.**. 1999. The role of IL-1 in interactive senescence and age-related human endometrial cancer. *Experimental Cell Res.*, 248:599-607.
4. Bushman, J.E., **Palmieri, D.**, Whinna, H.C. and Church, F.C. 2000. Insight into the mechanism of asparaginase-induced depletion of antithrombin III in treatment of childhood acute lymphoblastic leukemia. *Leukemia Res.*, 27:559-65.
5. Hartsough, M., Morrison, D.K., Salerno, M., **Palmieri, D.**, Ouatas, T., Mair, M., Patrick, J., and Steeg, P.S. 2002. Metastasis suppressor Nm23-H1 phosphorylates kinase suppressor of ras (KSR) via a histidine protein kinase pathway, *J. Biological Chemistry*, 277(35):32389-99.
6. **Palmieri, D.**, Lee, J. W., Juliano, R. L. and Church, F.C. 2002. Plasminogen Activator Inhibitor-Type 1 and 3 increases cell adhesion and motility of MDA-MB-435 breast cancer cells, *J. Biological Chemistry*, 277(43):40950-7.
7. Hoffman, M., Loh, K.L., Bond, V.K., **Palmieri, D.**, Ryan, J.L. and Church, F.C. 2003. Localization of heparin cofactor II in injured human skin: a potential role in wound healing. *Experimental Molecular Pathology*, 75(2):109-18.
8. Whitly, B., **Palmieri, D.**, Twerdi, C. D. and Church, F.C. 2004. Expression of active plasminogen activator inhibitor-1 reduces cell migration and invasion in breast and gynecological cancer cells. *Experimental Cell Res.*, 296:155-62.
9. Salerno, M., **Palmieri, D.**, Bouadis, A., Halverson, D. and Steeg, P.S. 2004. The kinase suppressor of ras scaffold differentially binds HSP90 in low and highly metastatic human breast carcinoma cells. *Molecular and Cellular Biology*, 25(4):1379-88.
10. **Palmieri, D.**, Halverson, D., Ouatas, T., Horak, C., Salerno, M., Johnson, J., Figg, W.D., Hollingshead, M., Hursting, S., Berrigan, D., Steinberg, S.M., Merino, M.J. and Steeg, P.S. 2005. Medroxyprogesterone acetate (MPA) elevates Nm23-H1 metastasis suppressor expression and inhibits the metastatic colonization of hormone receptor negative breast cancer. *JNCI*, 97(10):32-42.

11. Danforth, Jr., D.N., Zujewski, J., Abati, A., Filie, A., **Palmieri, D.**, Prindiville, S., Simon, R., Reid, T. and Steeg, P.S. 2006. Combined breast ductal lavage and ductal endoscopy for the evaluation of the high-risk breast: A feasibility study. *J. Surg. Oncol.* 94: 555-564.
12. **Palmieri, D.**, Bouadis, A., Ronchetti, R., Merino, M. and P. Steeg. 2006. Rab11a differentially modulates Epidermal Growth Factor-induced proliferation and motility in a model of breast premalignancy, *Breast Cancer Res Treatment*, 100: 127-137.
13. Heyn, C., Ronald, J.A., Ramadan, S. S., MacKenzie, L.T., Mikulis, D.J., **Palmieri, D.**, Brondor, J.L., Steeg, P.S., Yoneda, T., MacDonald, I.C., Chambers, A.F., Rutt, B.K. and Foster, P.J. 2006. In vivo tracking of growth and dormancy of solitary cells in a mouse model of breast cancer metastasis to the brain using MRI. *Mag. Reson. Med.* 56: 1001-1010.
14. N.D. Doolittle, D.M. Peereboom, G.A. Christoforidis, W.A. Hall, **D. Palmieri**, P. R. Brock, K.C.M. Campbell, T. Dickey, L.L. Muldoon, B.P. O'Neill, D.R. Peterson, B. H. Pollock, C. Soussain, Q. Smith, R.M. Tyson and E. Neuwelt. 2007. Delivery of Chemotherapy and Antibodies Across the Blood-Brain Barrier and the Role of Chemoprotection, in Primary and Metastatic Brain Tumors: Report of the Eleventh Annual Blood-Brain Barrier Consortium Meeting. *J. Neurooncology*, 81(1):81-91.
15. **Palmieri, D.**, Brondor, J.L., Herring, J.M., Yoneda, T., Weil, R.J., Stark, A.M., Kurek, R., Vega-Valle, E., Feigenbaum, L., Vortmeyer, A.O., Aldape, K. and Steeg, P.S. 2007. Her-2 overexpression increases the metastatic outgrowth of breast cancer cells in the brain. *Cancer Res.* 67(9):4190-8.
16. Horak, C.E., Lee J.H., Elkahloun A.G., Boissan, M., Dumont, S., Maga, T.K., Arnaud-Dabernat, S., **Palmieri, D.**, Stetler-Stevenson, W.G., Lacombe, M.L., Meltzer, P.S., Steeg, P.S. 2007. Nm23-H1 Suppresses Tumor Cell Motility by Down-regulating the Lysophosphatidic Acid Receptor EDG2. *Cancer Res.* 67(15):7238-46.
17. Beaulieu, L.M., Whitley, B.R., Wiesner, T.F., Rehault, S.M., **Palmieri, D.**, Elkahloun, A.G., Church, F.C. 2007. Breast cancer and metabolic syndrome linked through the plasminogen activator inhibitor-1 cycle. *Bioessays*. 29(10):1029-38.
18. Fitzgerald, D.P., **Palmieri, D.**, Hua, E., Hargrave, E., Herring, J.M., Qian, Y., Vega-Valle, E., Vortmeyer, A. O. and Steeg, P.S. 2008. Reactive glia are recruited by highly proliferative brain metastases of breast cancer and promote tumor growth. *Clin. Exp. Metast.* 25(7):799-810.
19. Gril, B., **Palmieri, D.**, Brondor, J.L., Herring, J.M., Vega-Valle, E., Feigenbaum, L., Leiwehr, D., Steinberg, S.M., Merino, M. J., Gilmer, T.M., Rubin, S.D. and Steeg, P.S.

2008. Effect of lapatinib on the outgrowth of metastatic breast cancer cells to the brain. *J Natl Cancer Inst.* 100(15):1092-103.
20. Baschnagel, A., Russo, A., Burgan, W.E., Carter, D., Beam, K., **Palmieri, D.**, Steeg, P.S., Tofilon, P. and Camphausen, K. 2009. Vorinostat enhances the radiosensitivity of a breast cancer brain metastatic cell line grown in vitro and as intracranial xenografts. *Mol Cancer Ther.* 8:1589-95.
21. **Palmieri, D.**, Fitzgerald, D., Shreeve, S.M., Hua, E., Bronder, J.L., Weil, R.J., Davis, S., Stark, A., Merino, M.J., Kurek, R., Mehdorn, H.M., Davis, G., Steinberg, S.M., Meltzer, P.S., Aldape, K. and Steeg, P.S. 2009. Analyses of resected human brain metastases of breast cancer reveal the association between up-regulation of hexokinase 2 and poor prognosis. *Mol. Cancer Res.* 7:1438-45.
22. **Palmieri, D.**, Lockman, P.R., Thomas, F.C., Hua, E., Herring, J., Hargrave, E., Johnson, M.J., Flores, N., Qian, Y., Vega-Valle, E., Taskar, K.S., Rudraraju, V., Mittapalli, R.K., Gaasch, J.A., Bohn, K.A., Thorsheim, H.R., Liewehr, D.J., Davis, S., Reilly, J., Walker, R., Bronder, J.L., Feigenbaum, L., Steinberg, S.M., Camphausen, K., Meltzer, P.S., Richon, V.M., Smith, Q.R., and P.S. Steeg. 2009. Vorinostat inhibits brain metastatic colonization in a model of triple-negative breast cancer and induces DNA double strand breaks. *Clin. Cancer Res.*, in press.

#### **Publications – Invited Reviews**

1. Steeg, P.S., **Palmieri, D.**, Ouatas, T. and Salerno, M. 2003. Histidine kinases and histidine phosphorylated proteins in mammalian cell biology, signal transduction and cancer, *Cancer Letters*. 190(1):1-12.
2. Salerno, M., Ouatas, T., **Palmieri, D.** and Steeg, P.S. 2003. Inhibition of signal transduction by the nm23 metastasis suppressor: Possible mechanisms. *Clinical & Experimental Metastasis*, 20:3-10.
3. Ouatas, T., Salerno, M., **Palmieri, D.** and Steeg, P.S. 2003. Basic and translational advances in cancer metastasis: Nm23, *J. Bioenergetics and Biomembranes*, 35(1):73-9.
4. Steeg, P.S., Ouatas, T., Halverson, D., **Palmieri, D** and Salerno, M. 2003. Metastasis suppressor genes: basic biology and potential clinical use. *Clinical Breast Cancer*, 4(1):51-62.
5. Weil, R.J., **Palmieri, D.**, Broder, J.L., Stark, A., and Steeg, P.S. 2005. Breast Cancer Metastasis to the Central Nervous System. *American J. Path*, 167(5)913-20.
6. **Palmieri, D.**, Horak, C.E., Lee, J.H., Halverson, D. and Steeg, P.S. 2006. Translational approaches to using metastasis suppressor genes. *J. Bioenergetics & Biomembranes*. 38:151-161.

7. **Palmieri, D.**, Smith, Q.R., Lockman, P.R., Bronder, J.L., Gril, B., Chambers, A.F., Weil, R. J. and Steeg, P.S. 2006-2007. Brain metastasis of breast cancer. *Breast Diseases*. 26:139-47.

8. **Palmieri, D.**, Chambers, A.F., Felding-Haberman, B., Huang, S. and Steeg, P.S. 2007. The biology of metastasis to a sanctuary site. *Clin. Cancer Res.* 13(6):1656-62.

#### **Publications – Book Chapters**

1. Horak, C.E., **Palmieri, D.** and Steeg, P.S. 2008. Nm23 Metastasis Suppressor Gene. In: Jackson, P. (Ed.). *Developments in Metastasis Suppressors*. Nova Publishers.

#### **Invited Seminars**

1. Meet-the-Expert Sunrise Session:Brain Metastasis, Joint Metastasis Research Society-AACR Conference on Metastasis. August 3-7, 2008. Vancouver, British Columbia

2. 8<sup>th</sup> Annual Carolyn Frye-Halloran Symposium on Neuro-Oncology. October 2, 2008. Massachusetts General Hospital, Boston, MA

3. The Chemotherapy Foundation Conference XXVI. November 4-8, 2008. NY, NY

4. Education Session:Metastatic Disease of the Central Nervous System American Society of Clinical Oncology Annual Meeting. May 29-June 2, 2009. Orlando, FL

#### **Oral Presentations – Abstracts**

1. Breast cancer metastatic growth inside the blood:brain barrier:Gene expression profiling of brain metastasis. 95<sup>th</sup> Annual Meeting of the American Association of Cancer Research. March 27-31, 2004. Orlando, FL

2. Lapatinib prevents the metastatic colonization of EGFR+ and Her-2+breast cancer cells in the brain. San Antonio Breast Cancer Symposium. December 13-16, 2007. San Antonio, TX

3. Preclinical studies in support of the use of Vorinostat (SAHA) for the treatment of brain metastases of breast cancer. Era of Hope Department of Defense Breast Cancer Research Program Meeting. June 25-28, 2008 Baltimore, MD

4. Preclinical studies investigating the efficacy of GSK461364A, an inhibitor of Polo-like kinase-1, for the prevention of breast cancer brain metastases. 100<sup>th</sup> Annual Meeting of the American Association of Cancer Research. April 18-22, 2009. Denver, CO

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American Journal of Pathology  
Cancer Research  
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**Teaching/Mentoring**

2001-present, Mentor, Postbaccalaureate Intramural Research Training Award (IRTA)  
Program, National Cancer Institute  
2004-present, Project LEAD Faculty, National Breast Cancer Coalition